



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,553	07/02/2003	Stefano S. Oggioni	FR920020056US1	6676
26502	7590	12/14/2004	EXAMINER	
IBM CORPORATION IPLAW IQ0A/40-3 1701 NORTH STREET ENDICOTT, NY 13760			NORRIS, JEREMY C	
			ART UNIT	PAPER NUMBER
			2841	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/613,553

Applicant(s)

OGGIONI ET AL.

Examiner

Jeremy C. Norris

Art Unit

2841



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

The drawings are objected to because the sectional views are not properly crosshatched (see MPEP 608.02). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

Applicant is reminded of the proper content of an abstract of the disclosure.

Art Unit: 2841

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because of the use of the phrase "is provided". Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,949,030 (hereafter Fasano).

Fasano discloses, referring to figures 1A-F, a coaxial via structure comprising: a first conductive via (26); a second conductive via (18) spaced apart from and surrounding a substantial portion of said first conductive via; and dielectric material (20) disposed between said first conductive via and said second conductive via [claim 1], wherein said second conductive via is the shape of an open ended cylinder (see fig. 1A) [claim 2], wherein said first and second conductive vias have a common axis (see fig. 1E) [claim 3].

Similarly, Fasano discloses, a coaxial via structure in an electronic device carrier adapted to connect first conductive track of a first conductive layer on a surface of a core to another conductive track of another conductive layer on an opposite surface of said core and third conductive track fourth conductive layer, dielectric layer being disposed between said third and fourth conductive layers, said coaxial via structure comprising: first conductive via (26) connected to said third and fourth conductive tracks; a second via (18) having a side wall with a conductive material thereon surrounding a substantial portion of said first conductive said conductive material

Art Unit: 2841

connected to said first and said other conductive tracks; and a dielectric material (20) disposed between said first conductive via and said conductive material on said side wall of said second via, said first and second conductive vias having a common axis, substantially perpendicular to said conductive layers (see fig. 1E) [claim 4], wherein said core (10) of said electronic device carrier is disposed between said first and said other conductive layers [claim 5], further comprising a fifth conductive track on said third conductive layer, partially surrounding said third conductive track and being substantially aligned with at least one part of said first conductive track and at least a third conductive via connecting said fifth and said first conductive tracks (see fig. 3) [claim 6], further comprising a second conductive layer arranged between said first and third conductive layers, dielectric layers being disposed between said first conductive layer, said second conductive layer and said third conductive layer, respectively, wherein said second conductive layer comprises a second conductive track being substantially aligned with at least one part of said first conductive track and connected to said at least fourth conductive via (see fig. 3), further comprising a sixth conductive track on said third conductive layer partially surrounding said third conductive track and being substantially aligned with at least one part of said second conductive track of said second conductive layer, and a fifth conductive via connecting said sixth conductive track and said second conductive track of said second conductive layer (see fig. 3) [claim 8], wherein said first conductive layer includes a first supplementary track and said second conductive layer includes a second supplementary conductive track being substantially aligned with at least a part of said first supplementary conductive track and

Art Unit: 2841

connected to said first supplementary conductive track by at least two supplementary conductive vias (see fig. 3) [claim 9], wherein said second conductive track at least partially surrounds said second supplementary conductive track (see fig 3) [claim 10], wherein said first conductive track at least partially surrounds said first supplementary conductive track [claim 11].

In addition, Fasano discloses, a method for building a coaxial via structure in an electronic device carrier, said method comprising the steps of: forming a first hole having a side wall in a substrate of said electronic device carrier; plating conductive material on said side wall of said first hole (fig. 1A); filling said plated first hole with a dielectric material (20, fig. 1B); forming second hole (25) having a side wall in said dielectric material of said filled plated first hole such that said first and second holes have substantially a common axis, a diameter said second hole being less than a diameter of said first hole (fig. 1D); and forming a conductive material (26) on said side wall of said second hole (fig. 1E), wherein said step of forming a conductive material on said side wall of said second hole comprises plating (col. 3, lines 60-65) [claim 13], wherein said step of forming a conductive material on said side wall of said second hole further includes substantially filling said second hole with said conductive material (col. 3, lines 60-65) [claim 14]

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents disclose PCBs having coaxial vias:

US 5,689,091      Hamzehdoost et al.,

Art Unit: 2841

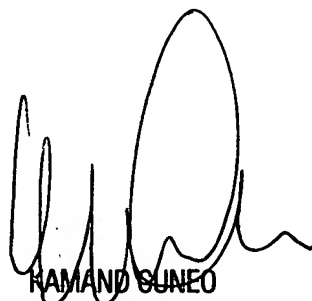
US 6,479,764      Frana et al..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 571-272-1932. The examiner can normally be reached on Monday - Friday, 9:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCSN



KAMAND CUNEO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800